IN THE CLAIMS:

Please amend the claims as follows:

1. (**Currently Amended**) ~~Actuating~~ An actuating system for actuating a member, the actuating system ~~of the type~~ comprising:

a computer;

an electric motor ~~(1)~~ controlled by ~~a~~ the computer, wherein the computer is configured ~~(2) that is designed~~ to regulate ~~the~~ a current supplied to the motor ~~(1)~~ as a function of a setpoint position ~~setpoint~~ of the member ~~that is~~ to be actuated;~~, said system comprising~~

a transmission device for transmitting ~~the~~ a movement of the motor ~~(1)~~ to the member, ~~said system being characterized in that~~ wherein the transmission device comprises an encoder ~~(3)~~ that is dependent on the movement of the motor ~~(1)~~, said encoder comprising a main multipolar track and a singularity that is indexed to a reference position of the encoder;~~, and in that the system comprises:~~

[[-]]a fixed sensor ~~(4)~~ comprising at least two sensitive elements ~~that are~~ arranged ~~facing~~ to face the main track across ~~and at~~ an air-gap ~~distance from~~ defined between the fixed sensor and the main track and at least one sensitive element designed to detect the singularity, ~~said~~ the fixed sensor being designed to deliver two square digital position signals ~~(A, B)~~ in quadrature, wherein the signals ~~which~~ are representative of ~~the~~ a position of the encoder ~~(3)~~;

[[-]]a processing device ~~(5)~~ for processing the signals ~~(A, B)~~, ~~which~~ the device ~~comprises~~ comprising counting means for determining, from an initial position, ~~the~~ an

actual position of the encoder, and means which, upon detection of the singularity, assigns the reference position as the initial position ~~(3)~~; and

[[-]]a comparison device ~~(6)~~ for comparing the actual position of the encoder ~~(3)~~ with ~~the~~ a theoretical position of the encoder ~~(3)~~ that corresponds ~~in theory~~ to the applied setpoint position.

Claim 2. (**Canceled**).

3. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~2~~, ~~characterized in that~~ wherein the main track of the encoder ~~(3) furthermore comprises a multipolar track that is referred to as the "top tour" track, said track being~~ is provided with the singularity and comprises a plurality of multipolar tracks, and wherein at least one sensitive element ~~being arranged facing and at an air-gap distance from said "top tour" track so as to deliver~~ delivers a digital signal ~~(C)~~ that comprises a pulse.

4. (**Currently Amended**) ~~System~~ The actuating system according to Claim 3, ~~characterized in that~~ wherein each multipolar track is formed of a magnetic ring on which ~~there are~~ magnetized north and south poles are equally distributed with a constant angular width therebetween, the magnetic singularity of ~~the "top tour"~~ a top track of the plurality of multipolar tracks is ~~being~~ formed of two adjacent poles, the magnetic transition of the top track being ~~which is~~ different from ~~the~~ a remainder of the plurality of multipolar tracks ~~others~~.

5. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 4~~, ~~characterized in that~~ wherein the sensitive elements of the fixed sensor are ~~chosen from the group comprising~~ comprise one of Hall probes, magnetoresistors and giant magnetoresistors.

6. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 5~~, ~~characterized in that~~ wherein the transmission device comprises ~~the~~ a rotor ~~(7)~~ of the motor ~~(1),~~ on which the encoder ~~(3)~~ is mounted.

7. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 5~~, ~~characterized in that~~ wherein the transmission device comprises a reducer ~~(8)~~ on a rotor ~~(9) of~~ on which the encoder ~~(3)~~ is mounted.

8. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 5~~, ~~characterized in that~~ wherein the transmission device comprises a rotor ~~(7)~~ provided with a pinion ~~(11)~~ and a part ~~(12)~~ provided with a rack ~~(13)~~, ~~which~~ wherein the rack and pinion are designed to transform ~~the~~ a rotary movement of the rotor ~~(7)~~ into a linear movement of the part ~~(12)~~, and wherein the encoder is ~~(3) being~~ associated with ~~said~~ the part.

9. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 8~~, ~~characterized in that~~ wherein the transmission device comprises a stop ~~that is~~ designed to interrupt the movement of the motor ~~(1)~~ in a reference position of the encoder ~~(3)~~, and ~~in that~~ wherein the processing device ~~(5)~~ comprises means which, upon interruption of the movement of the motor, ~~can assign~~ assigns the reference position as an initial position.

10. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 9~~, ~~characterized in that~~ wherein the comparison device ~~(6)~~ comprises alert means which, upon determination of a significant difference between the actual position and the theoretical position, ~~are designed to emit~~ emits a signal indicating an anomaly in ~~the~~ operation of the actuating system.

11. (**Currently Amended**) ~~System~~ The actuating system according to Claim 1 ~~any one of Claims 1 to 10~~, ~~characterized in that~~ wherein the comparison device ~~(6)~~ comprises an actuation feedback loop, which is controlled as a function of the determined difference between the actual position and the theoretical position.

12. (**Currently Amended**) ~~Method~~ A method of actuating a member using ~~a~~ the actuating system according to Claim 10, ~~characterized in that it~~ the method comprises the ~~provident~~ following iterative steps ~~of~~:

[[-]] ~~applying to the computer (2)~~ inputting a setpoint position ~~setpoint~~ of the member into the computer;

[[-]] determining the actual position of the encoder ~~(3)~~;

[[-]] comparing the actual position of the encoder ~~(3)~~ with the theoretical position of the encoder ~~(3) that corresponds in theory to the~~ that is applied to the setpoint position; and

[[-]] activating the alert means when ~~if~~ the difference between the actual position and the theoretical position is greater than a predetermined threshold value~~, activating the alert means~~.

13. (**Currently Amended**) ~~Method~~ A method of actuating a member using ~~a~~ the actuating system according to Claim 11, ~~characterized in that it~~ the method comprises the ~~provident~~ following iterative steps ~~of~~:

[[-]] ~~applying to the computer (2) a position~~ inputting a setpoint position of the member into the computer;

[[-]] determining the actual position of the encoder ~~(3)~~;

[[-]] comparing the actual position of the encoder ~~(3)~~ with the theoretical position of the encoder ~~(3)~~ that ~~corresponds in theory~~ is applied to the ~~applied~~ setpoint position;

[[-]] if the difference between the actual position and the theoretical position is greater than a predetermined threshold value, controlling the feedback loop ~~so as~~ to apply to the computer ~~(2)~~ a setpoint position ~~setpoint~~ that is slaved to the difference.

14. (**Currently Amended**) ~~Method~~ The method according to Claim 12 or 13 ~~when it depends on Claim 2 or 9~~, ~~characterized in that it comprises~~ comprising a step prior ~~procedure~~ to ~~of~~ determining the initial position of the encoder ~~(3), in~~ during which the motor ~~(1)~~ is supplied with the current ~~so as~~ to position the encoder ~~(3)~~ in ~~its~~ the reference position, wherein during the prior step the ~~said~~ reference position ~~being~~ is assigned in the processing device ~~(5)~~ as the initial position.

15. (**Currently Amended**) ~~Use of a system according to any one of Claims 1 to 11 for~~ A method for actuating a device ~~for metering~~ which meters an amount of fuel ~~in~~ supplied to a heat engine utilizing the actuating system of Claim 1.